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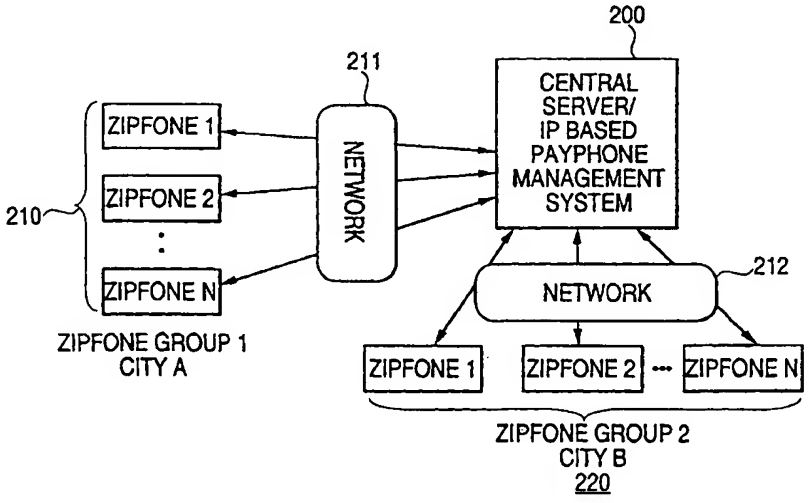

(57) Abstract

A system and method for advertising on pay telephone terminals over a communication network. A payphone management system collects advertising messages from advertisers, formats and stores the messages and collects revenue from the advertisers. An advanced pay telephone terminal receives and locally stores the advertising messages from the payphone management system. The advertising messages are displayed to users of the terminal in formats including full–motion video, still frame video, audio, animation and text. Advertising revenue subsidizes the cost of calling and serves to attract users to the terminal. In addition to subsidizing calling costs to the user, revenue sharing between the payphone operating company, the advertisers, the telephone company and the location owners is facilitated.

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ADVANCED PAYPHONE SYSTEM AND METHOD FOR ADVERTISING ON PAYPHONES OVER A COMMUNICATION NETWORK

A claim for priority is made to U.S. Provisional Application No. 60/125,189 filed March 19, 1999, the contents of which are incorporated herein by reference.

Field of the Invention

The invention relates to an advanced payphone system and a business method for generating revenue from the same. Specifically, the invention relates to advanced pay telephones having electronic advertising, Internet and multimedia capabilities used to provide the user with features not available on traditional payphones while generating additional revenue for the pay telephone operators and subsidizing costs to the user. The business method of the present invention has broad applicability extending beyond payphones to residential and other subscriber terminals.

Background of the Invention

Present pay telephones often provide little if any profit to the owners or operators of the telephones. Users of the pay telephones often use telephone calling cards to access local or long distance carriers directly, effectively bypassing the charges for use of the pay telephones. Also, pay telephones presently provide the users with very limited features. Advances in computing, telecommunications, the Internet, and technology in general have not translated commensurately in improvements to pay telephones such as increased functionality to the users.

In many parts of the world, telephone usage charges are relatively high. The user of a telephone, and especially the user of a pay telephone, is often extremely conscious of the costs involved in making a call. What is desired is a way to reduce the costs of telephone access to the user. What is also desired is a way to draw users to the telephones of a particular location owner over those of another owner and to encourage increased use of pay telephones.

Providing advertising at the pay telephone location is seen, by the inventor, as a way to increase revenue and improve margins for the pay telephone operator/owner while benefiting the user in reduced costs for telephone access and benefiting advertisers by providing greater and more directed exposure to their messages. Others have explored the concept of advertising to pay telephone users or other telephone users and have described related systems in other patents. These systems have various drawbacks, as described herein.

U.S. Patent No. 5,793,851 describes a pay telephone communication system where pay telephones are located in booths containing advertising materials of various businesses. Calls made to the advertising businesses from the pay telephone are free to the user. The calls are monitored by the system which can then bill the advertiser based upon the number of calls to the advertiser originated at the pay telephone. While this system permits specific calls to be free of charge to the user, one drawback of the system is that it does not subsidize the cost of non-advertising related calls by the user. Another drawback of the system is that the advertising is fixed within the booth; the system does not allow for video advertising nor does it allow for the advertising to be changed automatically or upon system command.

U.S. Patent No. 5,987,424 describes a system wherein various forms of advertisements are provided to a subscriber terminal through a telephone

exchange. Receipt and display of the advertising at the subscriber terminal adds to a discount money amount for that terminal which offsets the communication charges incurred at the terminal. One drawback of this system is that it requires on-line streaming of advertising information. Further, very little of the accounting is performed at the subscriber terminal. The system requires that the telephone exchange or network be equipped and configured to perform numerous functions beyond the routing of telephone calls, such as accounting and streaming of advertising during a call. Such network equipment and functionality must be present in order for the subscriber terminal to function as described. The on-line streaming of advertising increases network load.

U.S. Patent No. 5,515,424 describes a system for providing subscriber selected advertising in the form of video images to telephone stations. One drawback of this system is that it requires on-line streaming of advertising information. The system requires that the telephone exchange or network be equipped and configured to perform numerous functions beyond the routing of telephone calls, such as accounting and streaming of advertising during a call. Such network equipment and functionality must be present in order for the subscriber terminal to function as described. The network must have an image display database. The on-line streaming of advertising increases network load.

Summary of the Invention

The present invention allows telephone companies, payphone companies and location owners to make money from advertising that can be seen by users of the phone and also passers by. The screen can continue to display advertisements even when there is no one using the phone. As the payphones are located in public areas they provide an opportunity to advertisers to display their messages to passers by also. This advertising on the payphone instrument creates an additional revenue stream that was not available before.

The present invention allows for highly targeted advertising as an advertiser can choose to be on any individual payphone or group of payphone instruments, all instruments, or have the ad appear at various times in the day/week/month of choice, determine the duration of the ad, etc.

In addition to advertising, the present invention also allows for the enhancement of revenue streams from payphone terminals by providing additional features to the user that would tend to attract more users to the terminals and increase usage time of the terminals. Such features include, e-mail, video mail, video conferencing, Internet browsing, online chat. Also included are value added informational services such as airline and railway schedules and directory informational services.

The preferred embodiment of the present invention is a method of generating revenue from the operation of a communication system comprising subscriber terminals. This method involves, under the control of a central server, collecting a plurality of advertisements from advertisers and distributing at least one of the plurality of advertisements over a network to at least one subscriber terminal when that subscriber terminal is not in use by a user. The method also involves, under the control of that subscriber terminal, charging a user an amount of money for use of that subscriber terminal and displaying that at least one advertisement at that subscriber terminal. The invention does not rely on the local exchange or the telephone access network for call charge accounting or for image storing, processing, or transmission.

The system of the present invention provides advertisements over a communication network to users of subscriber terminals. The system includes a plurality of subscriber terminals connected to a network and, in the preferred embodiment, a central server connected to the plurality of subscriber terminals over the network for facilitating the off-line distribution of advertisements to the terminals. The central server controls the collection and distribution of

advertisements and to a certain extent controls the display of the advertising at the subscriber terminals. The terminals include the functionality of traditional pay telephones but also facilitate more advanced features such as the display of advertising on color screens. The terminals include modems for communication with the central server over the communication network. The advertisements are transmitted over the network from the central server to the terminals where they are then stored in a non-volatile memory. The advertisements are displayed and scrolled in a preprogrammed order and frequency when the terminal is in use or, in some public locations, whether or not the terminal is in use. Advertisements at a given terminal are updated periodically by the central server. Audio components of the messages can be output through a speaker of the payphone. The terminals can accept multiple modes of payment in contrast to the conventional one or two modes. The terminals in the system are assigned unique IP addresses to allow them to be individually accessible through the Internet. This allows for the terminals to provide increased functionality as an Internet device.

Brief Description of the Drawings

Figure 1 illustrates various parties and relationships that can be facilitated in the method of the invention;

Figure 2 illustrates a system of the present invention including a central server and a plurality of advanced subscriber terminals;

Figure 3 illustrates an advanced subscriber terminal of the kind that can be used with the method of the present invention;

Figure 4 illustrates the functional components of an advanced subscriber terminal under the present invention; and

Figure 5 illustrates one process for display of advertising under the present invention.

Detailed Description of the Invention

The present invention is directed to an advanced payphone system and method for advertising on the same in order to improve the profitability of payphones while increasing their utility to users. The method of the present invention pertains and applies not only to pay telephones, but also to advanced residential or business telephones and to generating a revenue streams therefrom. While reference is made to pay telephones, payphones and ZIPFones, it is intended that the business method of the present invention be understood to apply to any type of subscriber terminal capable of displaying advertising. In the context of the present specification, the "display" of advertising includes presentation, by any method, of advertising at the terminal, including audio, video (still frame, full motion or animation) or other methods, and any combinations thereof. Also, in the context of the present specification, "advertising" or "advertisements" are not limited to commercial messages or those intended to effect a commercial transactions. Rather, the content of the advertisement displayed can include informational, entertaining or others forms of non-commercial messages.

The present invention addresses the above-described needs of the telephone user, the pay telephone location owner and the advertisers. It attracts users to certain pay telephones, thus encouraging their use and creating revenue streams for various parties involved in the business method. The business method gives advertisers access to users of payphones or other telephones. The advertisers pay for this access and these revenues can be used to either subsidize the calling charges for the user and/or make additional profits for the telephone companies and/or payphone operating companies and other companies involved in the business method.

Generally described, the system of the present invention includes a central server and a plurality of advanced subscriber terminals (payphones, pay telephones, ZIPFones). These terminals include the functionality of traditional pay telephones but also facilitate more advanced features such as the display of

advertising on color screens. The terminals include modems for communication with the central server over the communication network. The advertisements are transmitted over the network from the central server to the terminals where they are then stored in a non-volatile memory. The advertisements are displayed and scrolled in a preprogrammed order and frequency when the terminal is in use or, in some public locations, whether or not the terminal is in use. Advertisements at a given terminal are updated periodically by the central server. Audio components of the messages can be output through a speaker of the payphone. The terminals can accept multiple modes of payment in contrast to the conventional one or two modes. These modes include coins, cards (magnetic stripe/chip/smart cards/bar-coded) and cash. The cash payment option is enabled with a built-in metering device that allows the terminal to print out a bill for each call using an attached printer. The amount on the bill is charged to the user by a location owner/operator. The terminals in the system are assigned unique IP addresses to allow them to be individually accessible through the Internet. This allows for the terminals to provide increased functionality as an Internet device.

Figure 1 illustrates the various parties and relationships that can be facilitated in the business method of the invention. These parties include: an advertiser 20, the payphone operating company 30, the telephone company 40, the payphone user 60, the payphone location owner 70, and the credit verification center/bank 80. The subscriber terminals used in the system, as described above, are shown as payphone 50 which represents one of many terminals that can be used in the invention. Also used in the invention is an Internet Protocol (IP) based payphone management system 10 which can be implemented in software resident in a central server/processor of one of the parties. In the preferred embodiment, the payphone operating company 30 controls or provides the payphone management system 10.

In the preferred embodiment of the invention, an important entity is the IP

based payphone management system 10 which, as mentioned, can be incorporated in a central server with a processor and is controlled and provided by the payphone operating company. In Figure 2, the relative relationship between the payphone management system and the numerous subscriber terminals is shown. In the figure, the payphone management system 200 is connected to ZIPFone Group 1 (210) in city A and to ZIPFone Group 2 (220) in city B some distance separated from city A. The connections are made over one or more communication networks 211 and 212. The present invention is not limited by the type of communication network used to connect the subscriber terminals with the payphone management system. In the preferred embodiment, it is envisioned that the connection is made over the same telephone network to which the subscriber terminals are connected.

Figure 3 illustrates an advanced payphone terminal of the present invention. As shown, this terminal 300 contains a display screen 310, a handset 350, a keypad 330, coin slots 360, a card slot 340 and preprogrammed "Hotkeys" 320.

The payphone management system 10 controls many aspects of and performs numerous functions within the business method. One of these functions is controlling the advertising under the present invention. Specifically, the payphone management system controls the collection and distribution of advertising messages and to a certain extent controls the display of the advertising at the subscriber terminals. The advertiser 20 is representative of one or more parties who wish to advertise, to sell a product or service or to provide non-commercial messages to users of subscriber terminals. In the preferred embodiment of the invention, the advertisers have a business relationship with the payphone operating company through which their advertisements are distributed to the terminals. In return, the advertisers pay the payphone operating company for the service provided. The advertising messages are collected from the advertiser 20 and stored at the payphone management system

10. In the preferred embodiment, this collection is performed by the payphone operating company. The advertising messages are typically in the form of full motion video, still images, animation, or text. These advertising messages are electronically coded, either by the advertiser or the payphone operating company in a format facilitating electronic storage and transmission.

Under the control of the payphone management system, the advertising messages are arranged and distributed to the individual subscriber terminals over the communication network where they are then stored in the non-volatile memories of the terminals. The advertising messages are distributed to a given terminal when that terminal is off-line - that is, during a time when it is not being used by a user.

Also under the control of the payphone management system is billing; in particular, the billing of users and of location owners. The amount that a user of the terminals is charged for making a telephone call can depend on the tariff table that is applied to the call. For example, local, intrastate, interstate and international calls all might have different tariff tables against which the call will be compared to determine the amount charged to the user. Further, there may be special rates depending on the time of day or based on marketing programs where certain days may be discounted. These tariff tables are stored in the terminal but can be transmitted and updated when necessary or periodically from the payphone management system. In addition, certain surcharges can be applied to the cost of the call. For example, the use of certain types of calling or credit cards may result in a surcharge as would operator assisted calls or calls made from more up-scale locations. The information needed for applying such surcharges to the amount charged to the user by the terminal is obtainable from the payphone management system.

The billing of location owners is also accomplished by the payphone management system. In one embodiment of the invention, the bill for a given

location owner is sent to the terminal of the location owner where it is stored in memory. An indication is placed on the screen of the terminal that the bill has arrived. The location owner can then display it on screen or it can be printed out. This method of billing represents a significant improvement and savings in costs over traditional billing by mail. Payment by the location owner on the bill can be made credit card or, in the preferred embodiment, by a charge to a prearranged debit account, authorization for which can be done through the terminal. In addition, authorization for the charge can be deemed given when a predetermined amount of time passes after such delivery of the bill to the location owner; fifteen days, for example.

The location owner, shown as 70 in Figure 1, refers to the party owning or managing the premises where the terminal is installed and, in some cases, also performing the task of running the payphone operation there on a daily basis. This is typically true in manned payphone outlets where cash is collected from users after every call and where user assistance has to be provided at the location. In the preferred embodiment of the business method of the present invention, the location owner is a franchisee of the payphone operating company and earns a regular commission on calls made from his outlet. The payphone operating company 30 installs and maintains the terminal at the location owner's premises for a set time period in exchange for a franchise fee collected in advance. The revenue collected by the location owner in the above scenario being relatively limited, the payphone operating company, through the present invention, provides the location owner with an additional revenue stream based upon the advertising on the terminal. The revenue collected by the payphone operating company from the advertisers is shared with the location owner. This encourages the location owner's acceptance of the terminal and franchise arrangement, even if at a relatively high franchise fee, and assures the location owner a stream of income without any additional effort on his or her part.

The payphone management system also facilitates and controls the

revenue sharing arrangements among the parties involved. The revenue to be collected from and charges to be made to the various parties are tracked and controlled by the payphone management system. In some cases, the payphone operating company itself owns the location where the terminal is installed. In those cases, no location owner revenue sharing is necessary. However, in most cases, the terminals are "rented" to the location owner for a franchise fee as described about. The sharing of the advertising revenue, through the payphone management system, in most cases more than offsets the franchise fee charged to the location owner. The location owner can also participate in providing its own advertising to the system, usually for display on specific terminals.

The advertising revenue can also be shared with the telephone company who provides the telephone access lines that connect to the terminals. Normally, the telephone company would charge the payphone operating company a fee for providing telephone network access to each terminal and also a fee for usage of the network. Under the method of the present invention and under the management of the payphone management system, the fees charged by the telephone company can be discounted based on a percentage of advertising revenue shared with the telephone company. The telephone company can also participate in providing advertising to the system for display on the terminals in exchange for discounted telephone access and/or usage charges.

The user also benefits from the revenue sharing arrangements in that the costs charged to the user for making calls is discounted and subsidized by the advertising revenue. Thus, from the user's perspective, using a payphone under the system of the present invention, such as a ZIPFone, is more cost effective than using a competing payphone. In all of the scenarios for revenue sharing described herein, the payphone management system knows the revenue sharing arrangements under effect for each of the terminals and thus the system keeps track of the accounts of the various parties accordingly.

The payphone management system also performs the function of credit management. The various parties involved in the system can have debit accounts with the payphone operating company. The balances of the accounts are maintained by the payphone management system. Of importance is the management of the debit accounts of the location owners. As users use the phone and pay the location owner, the amount due to the payphone operating company grows. Normally, the location owner is billed by the payphone management system every fifteen days or at other predetermined times. When certain predetermined thresholds for amount due are met, the payphone management system can immediately bill the location owner so as to avoid a lengthy delay in payment. Also, in cases where risk of non-payment is relatively high, the terminal in question can be deactivated by the payphone management system based on whether payment on the bill was received in a timely manner. This prevents further charges from incurring and limits possible loss due to non-payment.

Another function performed by the payphone management system is database management. An advertiser can be charged a flat fee for the display of their advertising messages. Through the database management capabilities of the payphone management system, data is collected on of the number of times an advertising message was displayed at a terminal viewed and by the number of terminals on which it was displayed. This information can be used to determine how much to bill the advertiser that provided that advertising message, instead of charging a flat fee. Other information that is collected includes the demographics of the users - that is, identification of the types of locations and of the geographic areas where the advertising messages were displayed. Such information is valuable to advertisers and can command a premium when determining the amount to charge and advertiser. Such information allows the advertiser to better target the advertising messages to the type of user desired.

The payphone management system also monitors the transactions occurring from the terminals between users and advertisers whose messages are displayed at the terminals. For example, when an advertising message is displayed to a user at a terminal and that user contacts the advertiser from that terminal using one of the "hotkeys", that event is recorded, preferably at the terminal, and later collected by the payphone management system. Also recorded and collected are occurrences of completed transactions between the user and the advertiser. The information is communicated to the advertiser along with information pertaining to the type of location involved. For example, indoor and more "safe" locations are more likely to result in the completion of commercial transactions with the advertiser than are outdoor and less more "safe" locations. Thus, advertising messages at those locations not well suited or likely to create complete transactions can be limited to brand recognition type messages. In contrast, advertising at "safe" location can include point-of-sale type messages.

Also, the payphone management system facilitates remote diagnostics of the terminals. By connecting the an individual terminal, the system can do maintenance checks and run diagnostic tests, attempt to solve problems remotely, and, in case of other problems, provide the technician with certain diagnostic information in advance of a physical visit to the terminal. The terminals themselves also allow for local diagnostic tests to be run via connection with a portable computer or through internal programming initiated by keypad to instruct the terminal to run a self-test.

As discussed herein with reference to Figure 1, advertiser 20 is representative of one or more parties who wish to advertise, to sell a product or service or to provide non-commercial messages to users of subscriber terminals. In the preferred embodiment of the invention, the advertisers have a business relationship with the payphone operating company through which their advertisements are distributed to the terminals. In return, the advertisers pay

the payphone operating company for the service provided. The advertising messages are collected from the advertiser 20 and stored at the payphone management system 10. In the preferred embodiment, this collection is performed by the payphone operating company. The advertising messages are typically in the form of full motion video, still images, animation, or text. These advertising messages are electronically coded, either by the advertiser or the payphone operating company in a format facilitating electronic storage and transmission.

The advertising messages are typically displayed while the terminal is in use and scroll periodically. However, in certain high-visibility locations such as airports, it is desirable to have advertising messages displayed even when the terminal is not in use. The messages can scroll periodically and a short audio portion can be produced in order to attract potential users.

The advertiser can choose at what terminal locations a given advertising message will be displayed, what type of advertising message to use (video, still frame, etc.) and the duration that the advertising message will be displayed. This offers a large degree of flexibility to both the advertiser and the payphone operating company in devising payment schemes. For example, a voice advertisement with a 10 second duration would command a lesser premium than a still image of the same duration. Alternatively, the payphone operating company can charge the advertiser a fixed amount of money for a fixed amount of display time, irrespective of the type of message displayed. The payphone management system is used to track the amounts to be charged the various advertisers based, in part, on information uploaded from the terminals regarding frequency and duration of the advertising messages displayed of the different advertisers.

The advertiser also has the benefit of having a captive audience in the user of the telephone terminals. In some countries average length of telephone

calls is on the order of 4-5 minutes. Since the user is continuously viewing the advertising message while using the telephone terminal, recall of the message is maximized. Use of the terminals by advertisers can also be made for the purpose of conducting surveys and brand recall exercises. For example, the user can be asked to answer a set of questions posed by the advertiser and in return receive some free minutes of phone use. This is coordinated by the payphone management system. The terminals can also be used to test brand recall. As the same users, in some locations, tend to use the same terminal over a period of time, brand recognition can be tested over, for example, a six month period through the questioning of the user via the terminal.

As mentioned above, in the preferred embodiment of the invention, the payphone management system 10 is under control of the payphone operating company 30. This entity provides the terminals and installs them at the various location owner sites. It enters into agreements with the advertisers, the telephone company, the bank/credit verification companies and the location owners. In other embodiments of the invention, the functions of the payphone operating company can be performed by other parties, such as the advertisers or the telephone companies, and the payphone management system would be under their respective control.

In Figure 1, telephone company 40 is representative of the company responsible for providing the telephone lines to the terminals. The present invention is not limited by the method in which the telephone company connects the terminals to its telephone network nor by the type of telephone network used. It is envisioned that, in additional to traditional public switched telephone networks, other networks would be used such as wireless, satellite, etc. In the preferred embodiment of the invention, the payphone operating company manages the payphone side of the business including finding the right locations, etc. and acts as a subscriber or franchisee to the telephone company by taking a fixed block of lines in a market and/or a fixed block of usage minutes in bulk.

The payphone operating company pays the telephone company a rentals amount on the lines used or a one time payment for the same. In addition, it can pay for minutes of use in bulk or as actually used. For telephone companies, an additional benefit of the present invention is that it increases usage of its telephone lines, which can correspond to increased revenue.

In another embodiment of the invention, the telephone company itself sets up the payphone network, including placement of the terminals. The management of the system is performed by a payphone management system located at a local exchange of the telephone company. In this embodiment, the telephone company can also easily extend the advertising aspect to advanced residential terminals for in-home use by customers in its service area. Audio messaging to residential customers with standard terminals can also be accomplished.

Also shown in Figure 1 is payphone user 60. This represents an actual user of the terminal making a telephone call therefrom. As described herein, some of the objects and resulting benefits of the present invention include the attraction of multiple users to a particular terminal through the provision of advertising, increased functionality and lower cost of calling. The business method of the present invention offers the ability to, in the preferred embodiment, the payphone operating company to subsidize the call charges through advertising/merchandising at the payphone location. Since call tariffing is generally predetermined by the telephone company or other entity, the call charges to the user under the present invention are discounted through advertising. The call charges can be discounted at a flat rate (e.g. a discount on the per minute charges). The tariff tables transmitted to the terminal from the payphone management system take into account the subsidy or discount applied against the normal tariffs used by the telephone company. The amount of the discount may vary from location to location and may also depend on the time of day. In another embodiment of the method of the present invention, the user

can receive a block of free calling time by using a terminal, and being subjected to the display of advertising messages, for an extended period of time. This can be done in place of or in addition to the discounting of call charges. The collection of free calling time instead of discounted calling effectively delay the subsidy, but still creates an incentive for users to use the payphone terminal under the present invention.

The user also benefits from various promotional schemes that are run through the payphone management system under the present invention. For example, to attract more users to a particular terminal, the payphone operating company may enter into an agreement with a consumer goods company such that a user would receive a coupon/ticket redeemable for a free good after using the terminal. In one scenario, the user would receive a coupon for a free soft drink after making a call for longer than some minimum length. Another scenario is receipt of a coupon for a free good if one or more questions/riddles are answered correctly via the terminal.

Advertisers or any consumer goods companies may sponsor prepaid calling cards with advertising printed on them which can be distributed to users. These cards, when used in a terminal under the system of the present invention, will heavily discount or render free to the user the calling costs incurred. In one embodiment, use of an advertiser's calling card results in that advertiser's messages being selected from the memory of the terminal and displayed for the user. In another embodiment, the cards contain electronic memories ("Smartcards") in which specific advertisements, are stored. When such cards are used with terminals under the present invention, the advertisements stored in the terminals for display are superseded by the advertisements stored in the calling card. The advertisement stored in the card, usually related to the product of the distributor of the card, are displayed in the terminal for the user.

Also shown in Figure 1 is the credit verification center/bank 80. This

party can be included under the business method of the present invention whenever verification of a user's credit is necessary. This is necessary when the user has chosen to pay for a call with a credit card. The payphone terminal 50 obtains authorization directly from the bank 80. The cost of these verifications can be passed on the user or can be recovered by offering advertising to the bank. Another scenario where bank verification of user credit is necessary is when the user chooses to complete a credit transaction with an advertiser he has contacted from the terminal. If the advertiser does not control the credit verification, it can be done by the present system. The terminal obtains pre-authorization from the bank 80 at the start of the call to the advertiser and completes the accounting with the bank when the call and transaction have completed.

The terminals described herein can be used for residential purposes. The phone can be given, sold or rented to the residential user by the payphone operating company, the telephone company, or even competitors of the incumbent telephone company as a way to increase market penetration. The user would be subjected to advertisements in the same way and would receive a sizeable discount on the calling charges.

Another way that revenue can be generated through the use of the business method of the present invention is by providing additional features and capabilities to the payphones/terminals. These capabilities include e-mail, video mail, Internet browsing, on-line chat and viewing long videos. The ability to utilize these features will command a premium from users and will also draw more users to the terminal. A small camera attached to the terminal can facilitate the sending of video mails and actual video conferencing from the terminal over the telephone or broadband network. Video games can be displayed on the screen of the terminal so that the user can play them while on hold or at anytime while using the terminal. So-called "value added" informational services can be implemented at the terminals to provided users

with such information as airline schedules, railway schedules and directory information services. Such information can be downloaded to the terminal from the payphone management system or can be resident at the terminal in a CD-ROM or other memory storage device. The use of "Smart Cards" with secure user information stored therein can facilitate online banking and other types of secure transactions from the terminal. The terminals used in the system of the present invention have individual Internet addresses. The ability to be IP addressable expands the possibilities for types of transactions exponentially since the terminals are then effectively Internet terminals. As the technology used for the payphone terminals advances, additional features can be implemented which would serve to increase the attractiveness to users and the revenues generated. The business method of the present invention is not limited by the features selected to be used.

As discussed above, additional revenue can be generated in this business method through the facilitation of Internet operability and transactions. For example, standard browsing and e-mail facilities can be implemented on the pay telephone. In addition, various advertising options can be used to boost the revenue potential. For example, the display screen in addition to the regular web page content, carries logos, baselines, product information, teasers, contests, etc. which the user sees and to which the user can respond. Advertising can be in the form of crawlers attached to the e-mail messages which the user sees every time he/she accesses the mailbox. Alternatively, every user can be made to click on to a particular web site for viewing the advertising content. This can be used to discount the user's Internet access charges in a variety of ways. The advertisements being displayed can be linked to either providing the user with free internet access for a certain time period or by charging only for the communication charges from the host to the Internet service provider's server. The Internet access charges can be waived. The system used in the business method contains the necessary means to account for such calls and present the user with detailed statements periodically.

Alternatively, the user can be urged to call the advertiser/manufacturer after seeing the advertisement to learn more about the product. This constitutes another call being originated from the terminal and the user gets the benefit of a free gift which the manufacturer gives out in return.

The use of the Internet with the present invention makes the following transactions on the system possible. The user using the terminal makes several railway inquiries through the Internet and finds the information displayed/updated on the screen. The user confirms the reservation and the device printer prints out the ticket or a confirmatory token which can be exchanged for a ticket during the journey. If a device printer is not attached, the system gives out a unique number which may be treated as the confirmation code. The same principle can be extended to doing any online reservation. The payphone operating company charges the service provider like railways, the airlines, the movie theaters, intermediaries, etc. for rendering this service. These companies benefit from a larger user turnout and a decentralized reservation arrangement. An advertisement message printed on the ticket being printed may add further value to the payphone operating company as the advertiser can be charged for this service.

Another lucrative transaction option enabled by the use of a terminal in the present invention is that of online banking. With the banking methodologies embracing the Internet paradigm, there is an urgent need to facilitate Internet banking. Providing this facility on public access terminals and deploying a model to support this represents yet another emerging method of tapping additional revenue streams. In this method, the user accesses his/her bank account from the multimedia payphone terminal and carries out a balance inquiry, payment of bills, sends messages to the bank, requests for personalized services, transfers of money, etc. The charges for accessing the Internet to carry out these transactions can again be handled in a variety of ways. In one scenario, the user pays for the call through a credit card or a debit card. The

fact that several such public access terminals exist throughout the city, at all prime locations especially, presents a strong case to the pay telephone operator to negotiate with the banks for advertising. Considering the fact that these devices may also be used for opening new accounts, all the interested banks may attract these potential customers through intuitive advertising. In addition, related channel partners dealing with these banking products will be interested in reaching out to this population. One scenario, related to banking, is the use of the payphone terminal in conjunction with a currency dispenser to provide "ATM"-type functionality. The bank in tandem with the payphone operating company can decide on the locations where these units may be installed

Yet another unique opportunity provided by the present invention is the generation of revenue for payphone operating companies through the use of Internet conferencing from the payphone terminals. The operator assigns a unique pager or account number to each of the subscribers to this service. The scenario is explained as follows: User A wants to carry out a conference between A , user B and user C. User A logs onto the Internet from one of the subscriber terminals, and commences a global search for B and C through their pager/account numbers. The system pages the other two users through special utility programs and if they are available on the Internet, sends a suitable message to them. If they are not available, then the payphone management system pages them on their mobile numbers. After a set time period, user A receives a message on his/her terminal that the other two users have been contacted and that they have logged onto the net. What follows is either a chat conference between the users or chat coupled with voice and video if the devices permit this at each end. If this group's details are registered with the payphone management system, advertisements related to the group can be sent to all the three terminals. The system so devised can be configured to charge the users in various ways such as "calling party pays" for both the call charges and the Internet access charges, but the called parties do not pay the internet charges. Alternatively, it can follow "called party pays" on a similar basis. The

payphone operator company may even have the Internet charges discounted uniformly for all the three users through advertising.

Another application of the present invention is that of mass video conferencing. In this scenario, a small camera attached to the front of the payphone terminal captures the image of the caller and uses the Internet backbone or wide band telephone lines to transmit the voice and images to the other party. The user is charged for placing the call and also based on the time duration of the video conference call. The pay terminal device can even print a bill for the amount. Alternatively, the payphone system may use a scanned image stored in the central server and may be transmitted across to the other side by the system. The above possibility may be effectively tapped by providing a variety of options to the user to superimpose the image on an electronic greeting card. This may be used on occasions like festivals by the user to greet the person on the other side. The payphone operating company or location owner may drive traffic to these outlets by dropping the Internet charges using highly focused advertising.

Another high potential area that the business model and the system address is interactive advertising. This hinges on the fact that advertising can be used in a very targeted, focused way to provide call benefits to the users thereby driving usage and hence higher revenues to the payphone operators. One scenario is as follows. A user of the terminal initiates a call. Based on the number being called, the terminal starts displaying advertisements that are meaningful in and around the geographical location of the called party. This can be advertisements like: pizza delivery, movie theaters, department stores, etc. with an option given to the user to get instant connectivity to these advertisers through the "Hotkey" arrangement on the terminal. The user either gets the call completely free or pays a discounted charge based on the advertisement seen and sale completed. Another scenario is as follows. After a user initiates a call from a terminal, the terminal and/or the payphone

management system read the profile of the user through his/her database profile stored internally and begins flashing advertising messages according to the lifestyle, behavioral patterns, past transactions, etc. of the user. The user can proceed with viewing the advertisements first, get a block of free time and then proceed with the normal call. This provides the user a call free for a certain time period beyond which he/she is charged for the call. Or, a set discount percentage can be applied to the call and the user can be charged accordingly. Yet another scenario is as follows. User A calls User B from a terminal. The payphone management system tracks the people talking, the time of the call and the past similar calls made by User A and displays advertisements related to the person, the time of the day and the past transactions done. For example, user A is a literature enthusiast and during his last conversation with user B ordered for the latest best-selling fiction novel from a certain book store. During this call, the terminal system flashes the same advertisement in an updated format to include all the new releases.

Furthermore, the business method is not limited to the type of terminal used. For example, as discussed above, residential phones can be used under the present invention with many of the same benefits to users and advertisers. It is anticipated that upcoming generations of digital wireless telephone with large displays will be used with the present invention. Since the user is often looking at the phone when dialing, advertising messages can be displayed thereon, whether transmitted on-line or when the phone was not in use. Thus, the cost of the calls can be subsidized by the advertiser or another party.

The terminals may also be deployed as "stand-alone" units. In certain circumstances, it may be more cost effective for the payphone operating company to pre-load the advertising messages onto the terminal before deployment. Subsequent contact with the terminal is minimal. Such terminals are deployed in remote or unmanned locations. In this scenario, the payphone management system is not used. Rather, the revenue is collected from the

advertisers for the advertising messages pre-loaded onto the terminals. The messages need not be updated or refreshed for long periods of time.

Figure 4 illustrates the functional components of an advanced subscriber terminal under the present invention, such as the one shown in Figure 3. The internal architecture of the advanced subscriber terminal 300 is similar to that of a computer in that it contains a motherboard, a memory, a power supply, a UPS, a modem, and other components commonly found in computers. It also contains a telephone circuit card as an attachment to this computing device. In Figure 4, the motherboard 410 contains a microprocessor 415 to control the operation of the subscriber terminal. The motherboard also contains numerous standard, memory decoded input/output ports, designated as interface (I/F) ports 420 to interface with the display device 450, the modem module 455, the memory module 445, the keyboard/user input device 460, and the telephone circuitry 470. The motherboard also contains card interface 425, coin interface 425, power supply interface 440, and serial data interface 435. In the preferred embodiment, the serial interface is an RS-232 port to allow serial data connection with devices such as computers or printers. It is envisioned that this interface can also be a Universal Serial Bus (USB) or any other type of interface allowing connection to the subscriber terminal.

The memory module 445 shown in Figure 4 represents the nonvolatile memory of the subscriber terminal used to store system and call data related information and advertisements. The data stored in the memory remains until it is overwritten. In the preferred embodiment of the invention, the memory module used is a flash RAM. Alternatives include the use of a CD-ROM or of a hard disk drive. It will be apparent to one skilled in the art that other types of non-volatile memory storage means can be used and that the present invention is not limited thereby.

The display device 450 is, in the preferred embodiment, a liquid crystal

display (LCD) with a 240 by 320 resolution and able to support 256 colors. The display is also shown in Figure 2 as element 310. The display, in the preferred embodiment is backlit based on a CCFL (Cold Cathode Filament Lamp) and displays information in two parts. The upper 204 lines are used for displaying advertisements and the remaining lines are used for displaying call related information such as the call amount, the duration, and the called station name. It is envisioned that other types of display devices can be used with the subscriber terminal, such as various sizes of LCDs with or without the backlight, vacuum fluorescent device based displays, CRT based displays, elementary LED based scrolling displays, or even displays allowing user interactivity such as touch screens and display screens with light pens for input. The present invention is not limited by the type of display screen chosen for use in the subscriber terminal. Further, it is not necessary that the display device be incorporated in the subscriber terminal; the display can be attached as separate device disposed beside or near the subscriber terminal.

Also shown in Figure 4 is modem module 455 which represents the modem equipped on the subscriber terminal. This is a standard data modem chosen from among many different commercially available modems. The main function of the modem is to allow for communication between the subscriber terminal and a central server through which advertisements and other information can be transmitted to the subscriber terminal and diagnostic and other subscriber terminal information can be uploaded to the server. The modem also allows for the terminal to connect with third-party devices directly; such third-parties include bank/credit verification centers and Internet service providers.

An uninterruptible power supply unit 465 is connected to the motherboard 410 through the power supply interface 440. The power supply 465 accepts a standard 220 VAC as input converted to 12 V DC voltage at converter 467. The power supply unit 465 also contains a sealed maintenance free battery 469 that provides an online backup power source for 8-10 hours in cases of a power failure

or interruption. The battery is constantly charged through a charging circuit provided internally in unit 469.

The telephone circuitry 470 connects to the motherboard through the interface ports 420. The circuitry contains standard telephone circuitry including speech circuitry 472, speech amplification circuitry 476, ringer circuitry 474 and metering circuitry 478. The subscriber terminal uses a standard -48v loop for telephone network connection and dials digit in a standard format (DTMF or pulse). The subscriber terminal supports both line reversal and 16 kHz signaling from the telephone exchange for metering the call. This allows the terminal to function as a self charging device or as one responsive to the 16 kHz signaling from the telephone exchange. It will be apparent to one skilled in the art that described here are standard telephone circuit components. The present invention is not limited to the specific components described herein.

Also shown in Figure 4 is the RJ11 port 485 for allowing connection with computer, fax machine or other device. This allows a user to connect the user's electronic device to the terminal and facilitates connection with the telephone network through the terminal. It also facilitates diagnostic analysis of the terminal by a service person. Other types of ports that can be used in place of the RJ11 include Infrared (IR) and USB. Also shown as attached to the telephone circuitry 470 is an audio speaker 480. This speaker is used, primarily, to output the audio component of an advertisement, the video component of which is displayed on the display screen 450. The speaker 480 also facilitates hands-free dialing by the user. The volume of the audio signal output from the speaker is adjustable from the keypad 460 on the terminal.

Figure 4 also shows the keypad 460, which is the primary user input device, connected to the motherboard 410 through the interface ports 420. In Figure 3, components of the keypad are shown as keys 330 and "hotkeys" 320. The keypad is mainly used as a means for dialing and entering information. The

keypad also contain a plurality of "Hotkeys" which are programmed keys that, when pressed, connect the user to a specific party. Some of the hotkeys are dynamically programmed to be used in conjunction with the advertising message being displayed on the screen at the time. For example, depressing one of the hotkeys can allow the user to connect to the advertiser corresponding to the advertising message displayed on the screen. Other hotkeys are programmed to allow the user to scroll through advertisements already displayed. Some of the hotkeys can be programmed to perform the same function irrespective of the advertisement being displayed; for example, to connect directly to local businesses. In addition to hotkeys, two special keys on the keypad allow the user to control the volume of the terminal and to access menu features of the subscriber terminal. The volume key, when depressed, increases the volume on the handset and speaker by 2 dB increments up to an increase of 8 dB. The menu key guides the user through various standard screens such as the instruction screen, directory information, etc. Other keys on the keypad are used in conjunction with the menu key to allow for user selection of various menu functions. Besides the keypad 460, other means by which user input can be obtained by the subscriber terminal include voice prompts through the handset, use of a touch screen display, fingerprint reader, attached keyboards, as well as the use of the above mentioned ports 435 and 485 for connection with user devices such as computers or personal digital assistants (PDA) to perform dialing.

The subscriber terminal can accept multiple modes of payment including coin and cards. These cards include prepaid calling cards, commercial credit cards, and "Smart Cards" containing electronically readable memories. For acceptance of coins of varying denominations a standard coin collection box is used (not shown) connected to the coin interface 430. There is also a return path provided to reject alien coins to return coins when the call is not connected. For acceptance of payment by card, there is attached a card reader (not shown) to the card interface 425. The card in inserted through a card slot 340 as shown in Figure 3. The card reader is of a hybrid variety which can read and validate both

"Smart Cards" and commercial credit cards. In the preferred embodiment of the invention, the reader supports cards conforming to the international standards T2G and Eurochip. One such card reader is the KDE 5900 manufactured in south Korea by KD Electronics. Validation of the user's card is based on the industry standard of active authentication and can be completed right from the terminal via modem. In an alternate embodiment of the invention, the terminal includes a bar code scanner which reads bar codes on a user's card. Further, the terminal can be equipped with an optical note reader to allow paper currency to be accepted by the terminal for payment.

The housing for the subscriber terminal is constructed for outdoor installations and has a rugged, vandal resistant aluminum diecast body. The terminal is provided with a secure locking arrangement which, in the preferred embodiment of the invention, includes an in-built electronic solenoid lock openable open entry of a password on the terminal. This lock is connected to the motherboard of the terminal which keeps a log in memory. In this way, the terminal keeps track of who has opened the terminal based upon the password used. The electronic lock can also be controlled remotely via the terminal's modem. In this way, the central server can lock or unlock the terminal remotely.

Attached to the terminal via the data port 435 is an alphanumeric printer (not shown). This printer is used primarily to print out call detail bills for the users of the terminal. The power supply to the printer can be drawn from the terminal itself (12V DC). Other uses for the printer include printing coupons/tickets for the user and payment or billing reminders to the location owner.

Figure 5 illustrates the basic process of displaying advertisements to a user under the present invention. In step 510, the user of the terminal picks up the receiver/handset and begins to dial the number of the party the user desires to contact. Assumed is that the user has made payment, or has obtained

authorization either on his calling card, credit card or Smart Card, or has obtained authorization to use the terminal from the location owner who will charge the user upon completion of the call. In step 512, the processor of the terminal detects the off-hook condition of the receiver and the fact the a user has dialed a number. The processor begins to display an advertisement retrieved from the memory of the terminal. The display can begin upon the user lifting the handset or upon the user dialing a number. This "display" is made on the screen of the terminal in the case of visual advertisements, with the audio portion, if any, being input from the speaker. The user's call is connected, as shown in step 514. In the meantime, as shown in step 516, while the call is underway, the advertisements are changed based upon a predetermined order and scheduled duration. On the screen, as indicated in step 518, both the advertisement and call related information are displayed. This call related information includes call charges, call duration, called party number and name, if available, and also the current time. When the user completes the call, in step 520, he hangs up the receiver/handset. The processor detects this and terminates the display of advertisements to the user. One variation to this process is the display of advertisements at the terminal irrespective of whether the terminal is actually in use. This is useful when the terminal is located in high visibility areas such as train stations or airports where the display of the advertisements of the terminal may be seen by passers-by and may attract users to the terminal.

Referring again to Figure 2, it is envisioned that both the server and the subscriber terminals can be connected to networks other than the traditional PSTN. Other types of networks than can be used under the present invention include wireless networks (CDMA, TDMA, GSM and VSAT based) and digital wireline networks (xDSL, ISDN). In these cases, the subscriber terminals are equipped with a converter module which provides standard two wire loop signaling to the terminal. The terminals are upgradeable in this way to facilitate operability with different types of networks and to ensure compatibility with future networks.

As mentioned above, the server/payphone management system 200 controls the collection and distribution of advertisements and to a certain extent controls the display of the advertising at the subscriber terminals. The advertisements are collected from the advertisers and stored at the payphone management system 200. In the preferred embodiment, this collection is performed entirely electronically through the connection of the central server 200 with the advertisers' computers. The advertisements are typically in the form of full motion video, still images, animation, or text. These advertisements are electronically coded, either by the advertiser or the payphone operating company in a format facilitating electronic storage and transmission. Coding of the advertisements is done using standard coding techniques. In the preferred embodiment, full-motion video advertisements are coded according to the MPEG format, still images are coded according to the JPEG or BMP formats and animation according to the animated GIF format. It would be apparent to one skilled in the art that many different formats for coding the advertisements can be used. The present invention is not limited by the type of coding format.

Under the control of the payphone management system, the advertisements are arranged and distributed to the individual subscriber terminals over the communication network where they are then stored in the non-volatile memories of the terminals. The advertisements are distributed to a given terminal when that terminal is off-line - that is, during a time when it is not being used by a user. Transmission of the advertisements, in the preferred embodiment of the invention, is accomplishing using standard PSTN modem protocols. It would be apparent to one skilled in the art that network specific protocols may be used, specifically when non-PSTN networks are used to connect the central server and the subscriber terminals.

The advertisements each have a unique signature attached to them when transmitted to the terminal and stored in the memory of the terminal. This

signature contains the sequence number for the advertisement as well as the requisite duration of display and can contain time of day restriction information. This information enables the processor of the terminal to determine in what order to display the advertisements and for how long. Referring again to Figure 5, in step 516 when the processor advances advertising images while the user is using the terminal, these images are displayed in an order according to the sequence number of the advertisements signature. The advertisements scroll according to a default period (e.g. 10 seconds) or according to the duration indicated in the signature. When the user hangs-up and the advertisement display is suspended, the sequence number of the last advertisement is stored in memory. When display of advertisements begins again, for example when a new user starts dialing, the next advertisement in the sequence is displayed. This prevents the undesired effect of displaying the first advertisements in the sequence much more often than the other advertisements stored in memory. Using the time of day information, certain advertisements can be displayed during specific time periods only. For example, an advertiser for a certain good may desire to have its advertisement displayed only during the daytime.

When necessary or on a regular basis, the payphone management system connects to the individual terminals and selectively updates one or more of the advertisements stored at the terminal. Usually, only some, and not all, of the messages are updated. This is done to ensure that advertiser's new messages are distributed to the terminals while avoiding the time consuming process of downloading a complete set of advertisements to the terminal.

As described herein, the server/payphone management system 200 also plays a role in the billing of the terminal users. The amount that a user of the terminals is charged for making a telephone call can depend on the tariff table that is applied to the call. For example, local, intrastate, interstate and international calls all might have different tariff tables against which the call will be compared to determine the amount charged to the user. Further, there may

be special rates depending on the time of day or based on marketing programs where certain days may be discounted. These tariff tables are stored in the terminal but can be transmitted and updated when necessary or periodically from the payphone management system. In addition, certain surcharges can be applied to the cost of the call. For example, the use of certain types of calling or credit cards may result in a surcharge as would operator assisted calls or calls made from more up-scale locations. The information needed for applying such surcharges to the amount charged to the user by the terminal is obtainable from the payphone management system. When the terminal is in a self-charging mode, the call charge is computed by the processor upon comparing the call characteristics to the stored tables and surcharges, and the amount charged is displayed in the screen.

The server/payphone management system 200 also communicates through the terminals to the payphone location owner. For example, messages can be sent from the server via the terminal modem to be displayed on the terminal screen. Such a message can include billing information or instructions for the location owner. The server also communicates with the terminals for the purpose of diagnostic analysis. Tests to be run by the terminal can be transmitted from the server. Results of tests run at the terminal can be displayed on the terminal screen for the technician or location owner. The terminals can be programmed to contact the server, during off-peak hours, and report on diagnostic analysis of terminal, or simply to report. Failure to report indicates to the server that the terminal may be exhibiting a malfunction and the appropriate personnel can be alerted.

One embodiment of the system of the present invention provides a unique advantage over existing systems. In this embodiment, the subscriber terminals have individual Internet Protocol (IP) addresses. This allows them to be individually addressable over the Internet. The server/payphone management system is also IP based and can connect with the individual terminals over the Internet. In this embodiment, the modem of the terminal

connects, over the attached network, to an Internet service provider. From this point, communication to and from the terminal occurs over the Internet backbone. The server similarly connects to the Internet and can distribute the advertisements and other information to the terminal over the Internet by using the terminal unique IP address. The terminal can be used as an Internet pay phone by communicating in a standard voice-over-IP protocol. Users of the terminal also have the ability to browse the Internet and conduct transaction thereover. Communication is based on Internet Protocol (IP) which allows for the instrument to be compatible with other internet compliant devices. With this Internet access and compatibility, web pages, active channels, data and other information are displayed in real time. Stock tickers and news headlines are also be displayed on the screen. Streaming audio and video can also be displayed. The audio portion for any of these messages can be enabled or disabled either by user or location owner or payphone operator. The subscriber terminal is itself individually IP addressable or addressable as a group of terminals. The use of the Internet also allows the server to more easily manage large groups of terminals distributed over great distance, even worldwide. Accordingly, in Figure 2, the networks 211 and 212 represent, in this embodiment, the Internet backbone.

It is also anticipated that, as the technology becomes more prevalent, users will desire to have the ability to send and receive video-mail messages, much as they already do today with voice-mail messages. The system of the present invention can accommodate such users and allow them to access their video-mail messages stored at some other location, possibly the users' service providers, and display the messages on the screen of the payphone. With the addition of a camera to the terminals, users also have the ability, with the system of the present invention, to send video-mail messages to another location and to participate in video conferencing.

The subscriber terminal can also be programmed to perform standard

basic voice-mail functions for the users. In this embodiment, the user sets-up a voice mail account with the payphone operating company. A caller wanting to leave a voice mail message for that user calls the virtual number assigned to that user by the payphone operating company. Alternatively, the caller can call a specific terminal and leave a voice-mail on the extension number assigned to the user. In either case, the user is paged via a paging network. This provides the user with an indication that a voice-mail has arrived. He can then go to his designated terminal, enter a password and retrieve the voice mail. The user can also call into that terminal to receive the voice mail over the telephone.

Incorporated by reference herein is the document entitled "ZIPFone Instruction Manual" printed by ZIP Telecom Limited. It should be understood that the above description of the invention and specific examples, while indicating preferred embodiments of the present invention, are given by way of illustration and not limitation. Many changes and modifications within the scope of the present invention may be made without departing from the spirit thereof, and the present invention includes all such changes and modifications.

I claim:

1. A method of generating revenue from the operation of a communication system comprising subscriber terminals, said method comprising:

under the control of a server,

collecting a plurality of advertisements from an advertiser;

distributing at least a subset of said plurality of advertisements over a network to at least one subscriber terminal when said subscriber terminal is not in use by a user; and

under the control of said subscriber terminal,

charging a user an amount of money for use of said subscriber terminal; and

displaying said at least one advertisement from said subset at said subscriber terminal.

2. A method according to claim 1 further comprising, under control of the server, charging an amount of money to said advertiser.

3. A method according to claim 2 wherein said amount of money charged to said advertiser is based upon a number of advertisements from said advertiser actually displayed at said subscriber terminal.

4. A method according to claim 1 wherein said amount of money charged to a user is at least partially subsidized by revenue collected from said advertiser.

5. A method according to claim 1 further comprising, under control of the server, arranging said subset of said plurality of advertisements in a predetermined order before distribution to said subscriber terminal.

6. A method according to claim 5, wherein said subset comprises advertisements targeted to a specific user audience based upon a location of said subscriber terminal.

7. A method according to claim 1, wherein said subset comprises advertisements chosen by said advertiser to be displayed on said subscriber terminal.

8. A method according to claim 1, wherein said subset comprises advertisements, chosen by said terminal based upon digits dialed by the user, of advertisers located near a party being called by the user.

9. A method according to claim 1 further comprising, under the control of the server, distributing at least one of a tariff table and a surcharge formula to said subscriber terminal and wherein said amount of money charged to the user is determined, under control of the subscriber terminal, by referencing said at least one of a tariff table and a surcharge formula.

10. A method according to claim 1 further comprising, under control of the server, billing of a location owner of said subscriber terminal through said subscriber terminal.

11. A method according to claim 10 further comprising, under control of the server, debiting an account of said location owner stored at said server, upon one of receipt of authorization from said location owner and elapse of a predetermined amount of time after said billing.

12. A method according to claim 1 further comprising, under control of the server, collecting revenue from said advertiser and sharing said revenue with at least one of a location owner of said subscriber terminal, a telephone company providing telephone access to said subscriber terminal and a payphone

operating company managing said server.

13. A method according to claim 1 further comprising, under control of the subscriber terminal, recording information on interactions between a user and said advertiser and, under control of the server, collecting said information and providing said information to said advertiser.

14. A method according to claim 13, wherein said information contains a record of at least one of a contact by a user to said advertiser and a completed transaction between a user and said advertiser.

15. A method according to claim 1, wherein said subscriber terminal is oriented to allow display of said at least one advertisement to non-users of the subscriber terminal.

16. A method according to claim 1, further comprising, under control of the subscriber terminal, printing a ticket for a user, wherein said ticket is redeemable with a third party for a good or service.

17. A method according to claim 16, wherein said third party is said advertiser.

18. A method according to claim 1, wherein said amount of money charged to the user is discounted based on an amount of free minutes of use credited to the user.

19. A method according to claim 1, further comprising, under control of the subscriber terminal, allowing the user to play a video game on a display screen of the subscriber terminal.

20. A method according to claim 1, further comprising, under control

of the subscriber terminal, reading a calling card containing a readable indication of said advertiser, and limiting display to only advertisements of said advertiser.

21. A method according to claim 1, further comprising, under control of the subscriber terminal,

reading an electronic calling card containing a memory on which a second set of advertisements are stored;

suspending display of said subset of said plurality of advertisements stored at the subscriber terminal;

displaying at least one of said second set of advertisements at said subscriber terminal, and

under control of the server,

charging an amount of money to said advertiser.

22. A method of advertising from a subscriber terminal, said method comprising:

reading, in said subscriber terminal, an electronic calling card containing a memory on which advertisements are stored;

allowing a user to use said subscriber terminal;

debiting said calling card for use of said subscriber terminal; and

displaying at least one of said advertisements at said subscriber terminal.

23. A method of generating revenue from advertising at a subscriber terminal, said method comprising:

collecting advertising messages from an advertiser;

distributing a subset of said advertising messages to the subscriber terminal when the subscriber terminal is not in use by a user;

charging a user an amount of money for use of the subscriber terminal;

displaying at least one advertising message of said subset on the subscriber terminal; and

charging the advertiser an amount of money for display of said at least one advertising message.

24. A system for generating revenue from advertising over a communication network, said system comprising:

at least one subscriber terminal for allowing a user to commence a telephone call, for charging a user an amount of money for use of said subscriber terminal and for displaying advertisements stored in a memory contained therein; and

a server for collecting a plurality of advertisements from an advertiser and, when said subscriber terminal is not in use by a user, distributing at least a subset of said plurality of advertisements over the communication network to said at least one subscriber terminal for storage in said memory.

25. A computer readable data storage medium having a program code recorded thereon, said program code comprising instructions to perform:

collecting of a plurality of advertisements from advertisers;

distributing of at least a subset of said plurality of advertisements over a network to at least one subscriber terminal when said subscriber terminal is not in use by a user;

charging a user an amount of money for use of said at least one subscriber terminal; and

displaying said at least one advertisement at said at least one subscriber terminal.

26. A computer readable data storage medium according to claim 25, wherein said program code further comprises instructions to charge an amount of money to said advertiser.

27. A computer readable data storage medium according to claim 26, wherein said program code further comprises instructions to base said amount of

money charged to said advertiser upon a number of advertisements from said advertiser actually displayed at said subscriber terminal.

28. A computer readable data storage medium according to claim 25, wherein said program code further comprises instructions to at least partially subsidize said amount of money charged to the user by revenue collected from said advertiser.

29. A computer readable data storage medium according to claim 25, wherein said program code further comprises instructions to arrange said subset of said plurality of advertisements in a predetermined order before distribution to said subscriber terminal.

30. A computer readable data storage medium according to claim 29, wherein said subset comprises advertisements targeted to a specific user audience based upon a location of said subscriber terminal.

31. A computer readable data storage medium according to claim 25, wherein said subset comprises advertisements chosen by said advertiser to be displayed on said subscriber terminal.

32. A computer readable data storage medium according to claim 25, wherein said program code further comprises instructions to distribute at least one of a tariff table and a surcharge formula to said subscriber terminal and wherein said amount of money charged to the user is determined by referencing said at least one of a tariff table and a surcharge formula.

33. A computer readable data storage medium according to claim 25, wherein said program code further comprises instructions to perform billing of a location owner of said subscriber terminal through said subscriber terminal.

34. A computer readable data storage medium according to claim 33, wherein said program code further comprises instructions to perform debiting of an account of said location owner upon one of receipt of authorization from said location owner and elapse of a predetermined amount of time after said billing.

35. A computer readable data storage medium according to claim 25, wherein said program code further comprises instructions to collect revenue from said advertiser and share said revenue with at least one of a location owner of said subscriber terminal, a telephone company providing telephone access to said subscriber terminal and a payphone operating company providing said computer readable medium.

36. A computer readable data storage medium according to claim 25, wherein said program code further comprises instructions to record and collect information on interactions between a user and said advertiser and to provide said information to said advertiser.

37. A computer readable data storage medium according to claim 36, wherein said information contains a record of at least one of a contact by a user to said advertiser and a completed transaction between a user and said advertiser.

38. A computer readable data storage medium according to claim 25, wherein said program code further comprises instructions to print a ticket for a user, wherein said ticket is redeemable with a third party for a good or service.

39. A computer readable data storage medium according to claim 25, wherein said program code further comprises instructions to discount said amount of money charged to the user based on an amount of free minutes of use credited to the user.

40. A computer readable data storage medium according to claim 25, wherein said program code further comprises instructions to allow the user to play a video game on a display screen of the subscriber terminal.

41. A computer readable data storage medium according to claim 25, wherein said program code further comprises instructions to read a calling card containing a electronically readable indication of said advertiser, and to limit display to only advertisements of said advertiser.

42. A computer readable data storage medium according to claim 25, wherein said program code further comprises instructions to read an electronic calling card containing a memory on which a second set of advertisements are stored, to suspend display of said subset of said plurality of advertisements stored at the subscriber terminal, to display at least one of said second set of advertisements at said subscriber terminal, and to charge an amount of money to said advertiser.

43. A computer readable data storage medium having a program code recorded thereon, said program code comprising instructions for a subscriber terminal to perform:

reading a calling card containing a memory on which advertisements are stored;

allowing a user to use said subscriber terminal;

debiting said calling card for use of said subscriber terminal; and

displaying at least one of said advertisements at said subscriber terminal.

44. A system for providing advertisements over a communication network to users of subscriber terminals, said system comprising:

a plurality of subscriber terminals connected to said network;

a central server connected to said plurality of subscriber terminals over said network for facilitating the off-line distribution of advertisements to said

terminals.

45. A system according to claim 44 wherein at least one of said subscriber terminals is a payphone.

46. A system according to claim 45 wherein said advanced payphone comprises:

a processor for controlling the operation of said payphone;

a non-volatile memory for storing advertisements; and

a display device for displaying said advertisements to a user of said payphone.

47. A system according to claim 46, wherein said payphone further comprises a modem to allow for communication between the payphone and another electronic device over said network.

48. A system according to claim 47, wherein said payphone further comprises a user input device for allowing a user to control operation of said payphone.

49. A system according to claim 47, wherein said payphone further comprises a data port for connection with user devices.

50. A system according to claim 48, wherein said payphone further comprises a card reader for reading a user's card and accepting payment by said card, for use of said payphone.

51. A system according to claim 44, wherein said central server further comprises a database for storing advertisements and a processor programmed to control distribution of advertisements to and perform management of said subscriber terminals.

52. A system according to claim 51, wherein said subscriber terminals have individual Internet Protocol addresses and wherein said network is an Internet.

53. A system according to claim 51, wherein said advertisements comprise at least one of video, audio, still image, animation and wherein said central server distributes said advertisements in coded data formats facilitating electronic storage and transmission.

54. A system according to claim 44, wherein said network is at least one of a CDMA, TDMA, GSM, VSAT, xDSL and ISDN based network and wherein at least one of said plurality of subscriber terminals further comprises a converter to facilitate connection to said network.

55. A method of advertising over a communications network to persons in the vicinity of a subscriber terminal, said method comprising:

collecting advertisements at a central server;

distributing at least a subset of said advertisements over said network to said subscriber terminal while the subscriber terminal is not is use by a user; and

displaying at least one advertisement from said subset at the subscriber terminal.

56. A method according to claim 55 wherein said subscriber terminal comprises a processor for controlling he operation of the terminal, a non-volatile memory for storing advertisements, and a display device for displaying said advertisements to a user of the terminal, said method further comprising:

detecting, at the processor, that a user has commenced use of said terminal;

displaying, on the display device, at least a first advertisement from said

subset of advertisements;

detecting, at a processor, that said user has terminated use of said terminal; and

suspending display of advertising on the display device.

57. A method according to claim 56, further comprising displaying at least a second advertisement from said subset of advertisements on the display screen when said processor detects that use of terminal has re-commenced.

58. A method according to claim 55 wherein said subscriber terminal is a payphone comprising a processor programmed to control the operation of the payphone, a non-volatile memory for storing advertisements, and a display device for displaying said advertisements to a user of the payphone, said method further comprising:

storing said subset of advertisements in said non-volatile memory of said payphone, and

wherein said at least one advertisement is displayed on said display device.

59. A method according to claim 58 wherein a plurality of advertisements are displayed on said display device and wherein an order of display of said advertisements is determined by said processor based upon a sequence number present in each of said advertisements.

60. A method according to claim 58 wherein a time at which said at least one advertisement will be displayed is determined by said processor based upon a time of day indicator present in said at least one advertisement.

61. A method according to claim 58 wherein a duration for display of said at least one advertisement is determined by said processor based upon a duration time indicator present in said at least one advertisement.

62. A method according to claim 58 wherein said payphone includes a modem, and wherein said step of distributing at least a subset of said advertisements is completed through said modem.

63. A method according to claim 62, wherein said advanced payphone further comprises a card reader, said method further comprising reading a user's card and accepting payment by said card, for use of said payphone.

64. A method according to claim 55, wherein said central server further comprises a database and a processor, said method further comprising:

storing said collected advertisements in said database; and

controlling distribution of said subset of advertisements by said processor.

65. A method according to claim 64, wherein said advertisements comprise at least one of video, audio, still image, animation and wherein said central server distributes said advertisements in coded data formats facilitating electronic storage and transmission.

66. A method according to claim 55, wherein said network is at least one of a CDMA, TDMA, GSM, VSAT, xDSL and ISDN based network, said method further comprising: converting, at said subscriber terminal, a data format to facilitate connection to said network.

67. A payphone for providing advertising and facilitating communications by a user, said payphone comprising:

a processor for controlling the operation of the payphone;

a non-volatile memory for storing advertisements; and

a display for displaying said advertisements to a user of the payphone,

wherein a plurality of advertisements are stored in said memory and wherein said processor controls display of said advertisements on said display device.

68. A method of advertising on a payphone comprising a processor for controlling the operation of the payphone, a non-volatile memory for storing advertisements, and a display device for displaying said advertisements to a user of the payphone, said method comprising:

storing a plurality of advertisements in said memory before deployment of said payphone; and

displaying said advertisements on said display device.

FIG. 1

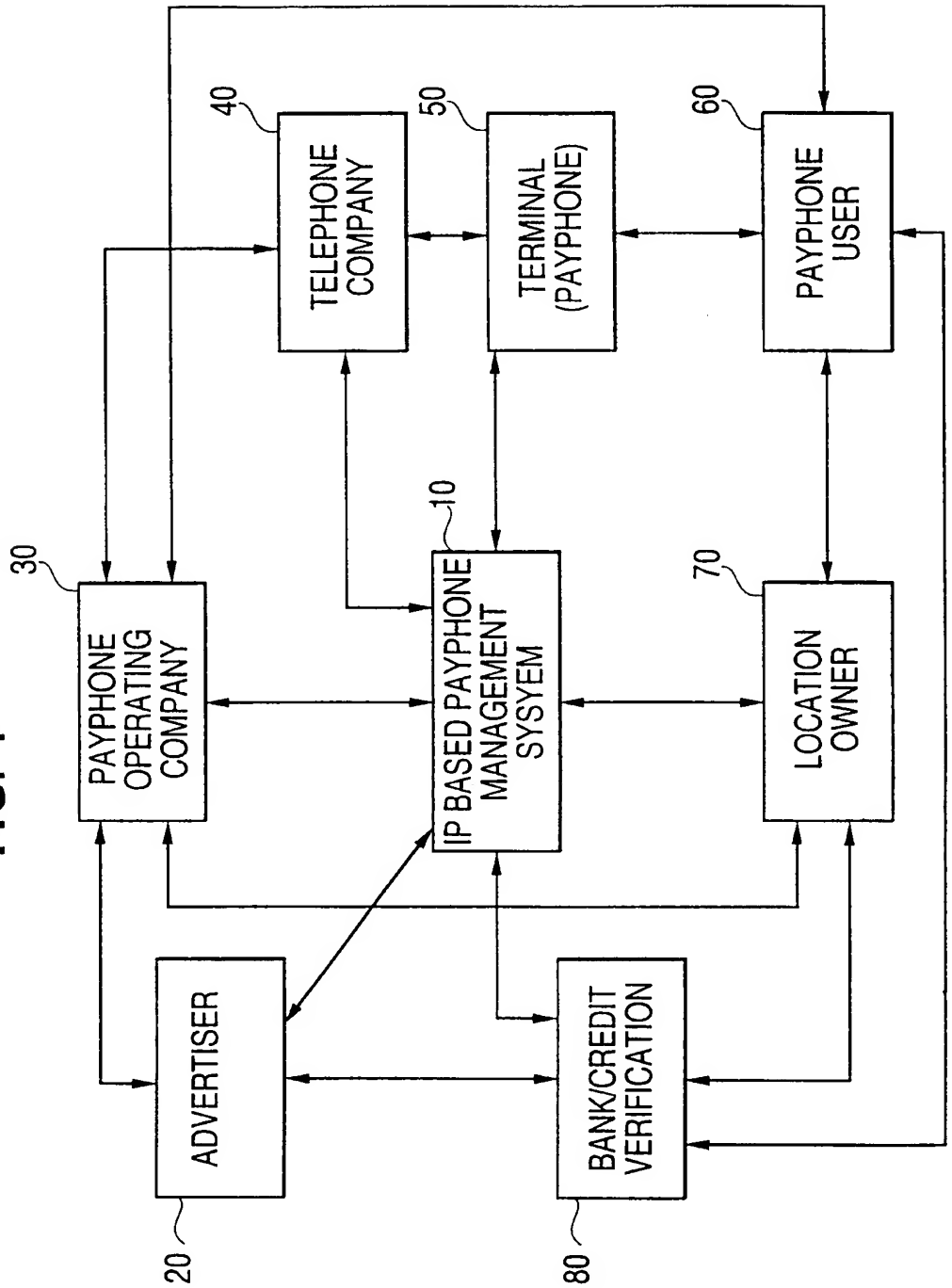

TELEPHONE COMPANY
40
TERMINAL (PAYPHONE)
50
PAYPHONE USER
60
PAYPHONE OPERATING COMPANY
30
IP BASED PAYPHONE MANAGEMENT SYSYEM
10
LOCATION OWNER
70
ADVERTISER
20
BANK/CREDIT VERIFICATION
80

FIG. 2

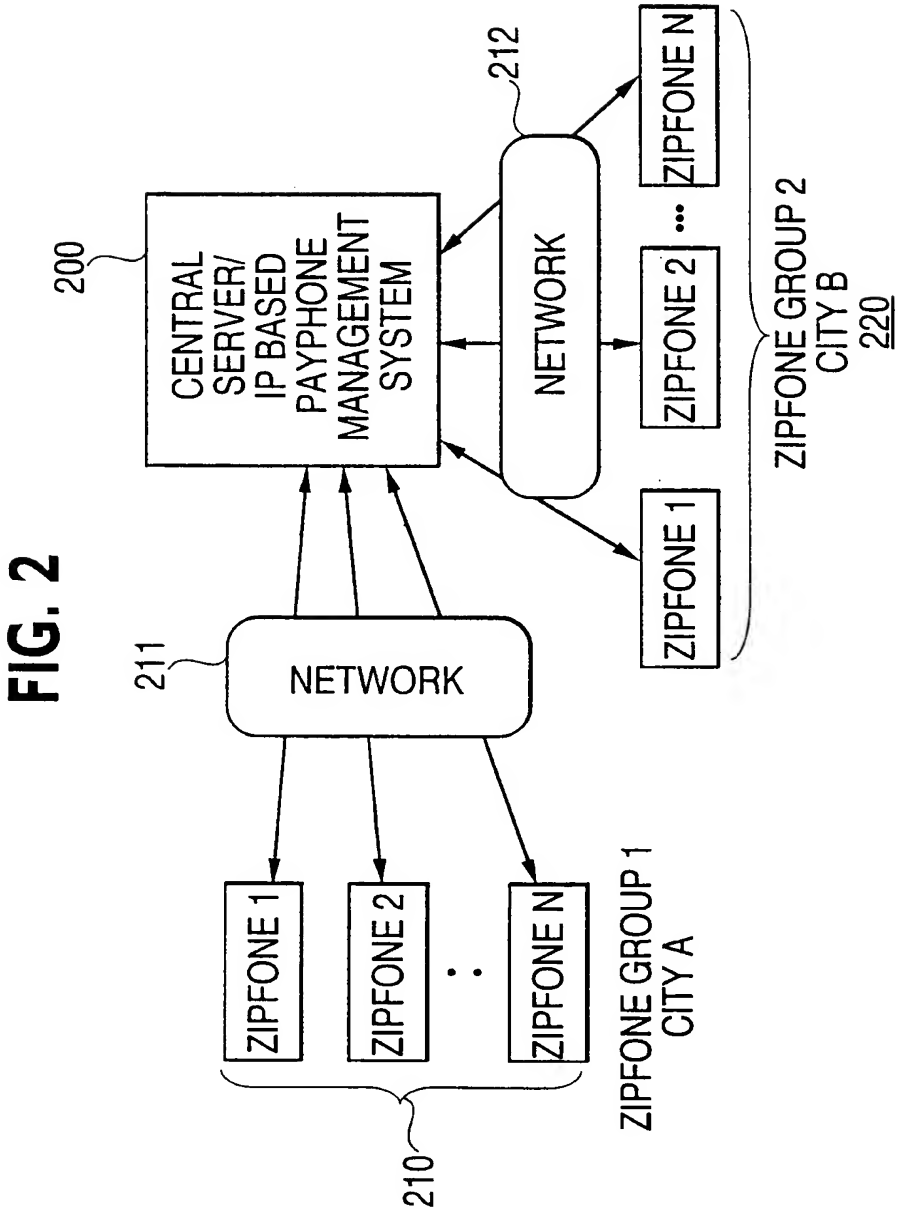
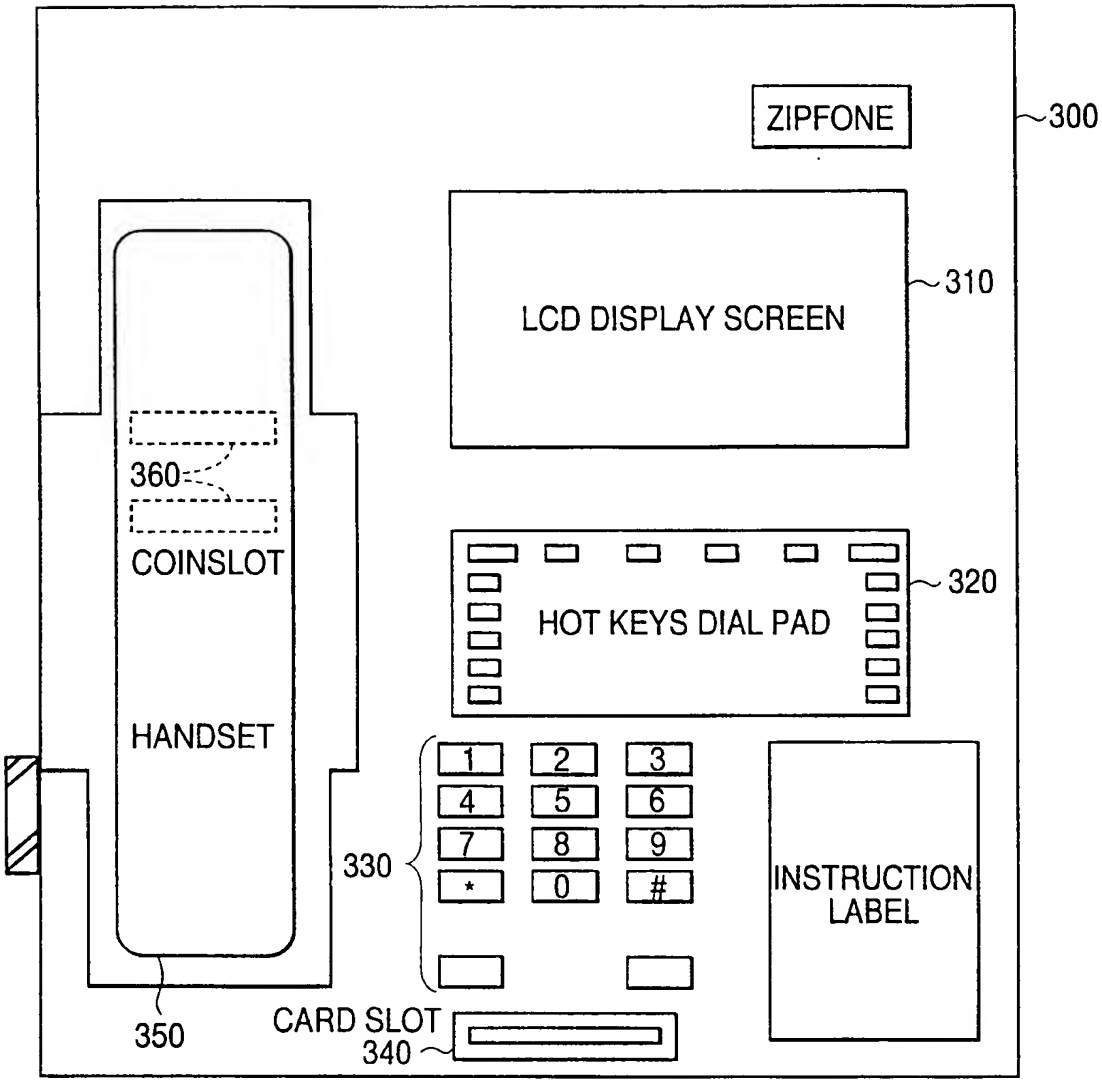

200
CENTRAL SERVER/ IP BASED PAYPHONE MANAGEMENT SYSTEM
211
NETWORK
212
NETWORK
ZIPFONE 1
ZIPFONE 2
ZIPFONE N
ZIPFONE GROUP 1 CITY A
210
ZIPFONE 1
ZIPFONE 2
ZIPFONE N
ZIPFONE GROUP 2 CITY B
220

FIG. 3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300
LCD DISPLAY SCREEN
310
360
COINSLOT
HOT KEYS DIAL PAD
320
HANDSET
1
2
3
4
5
6
7
8
9
*
0
#
330
INSTRUCTION LABEL
350
CARD SLOT
340

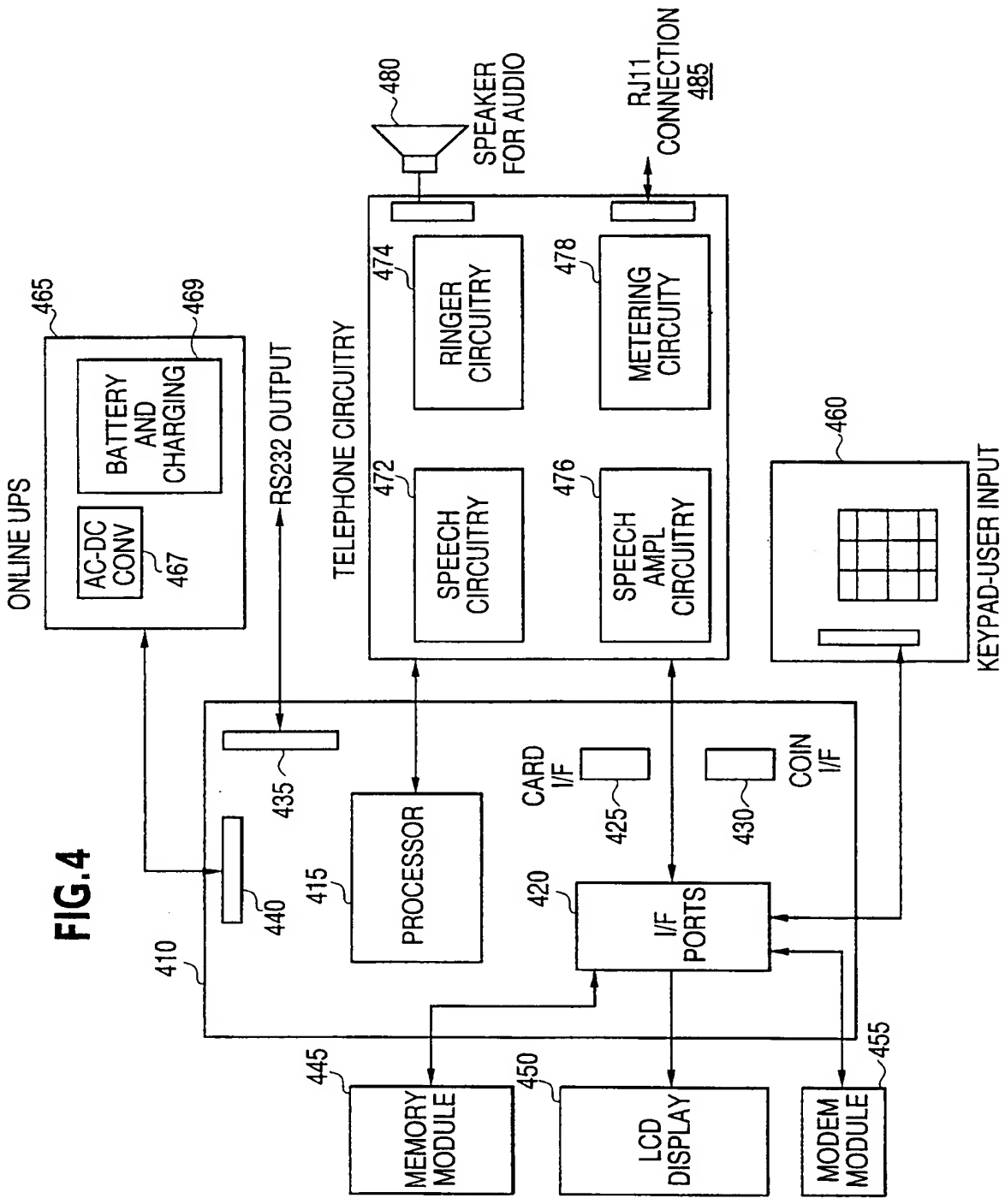
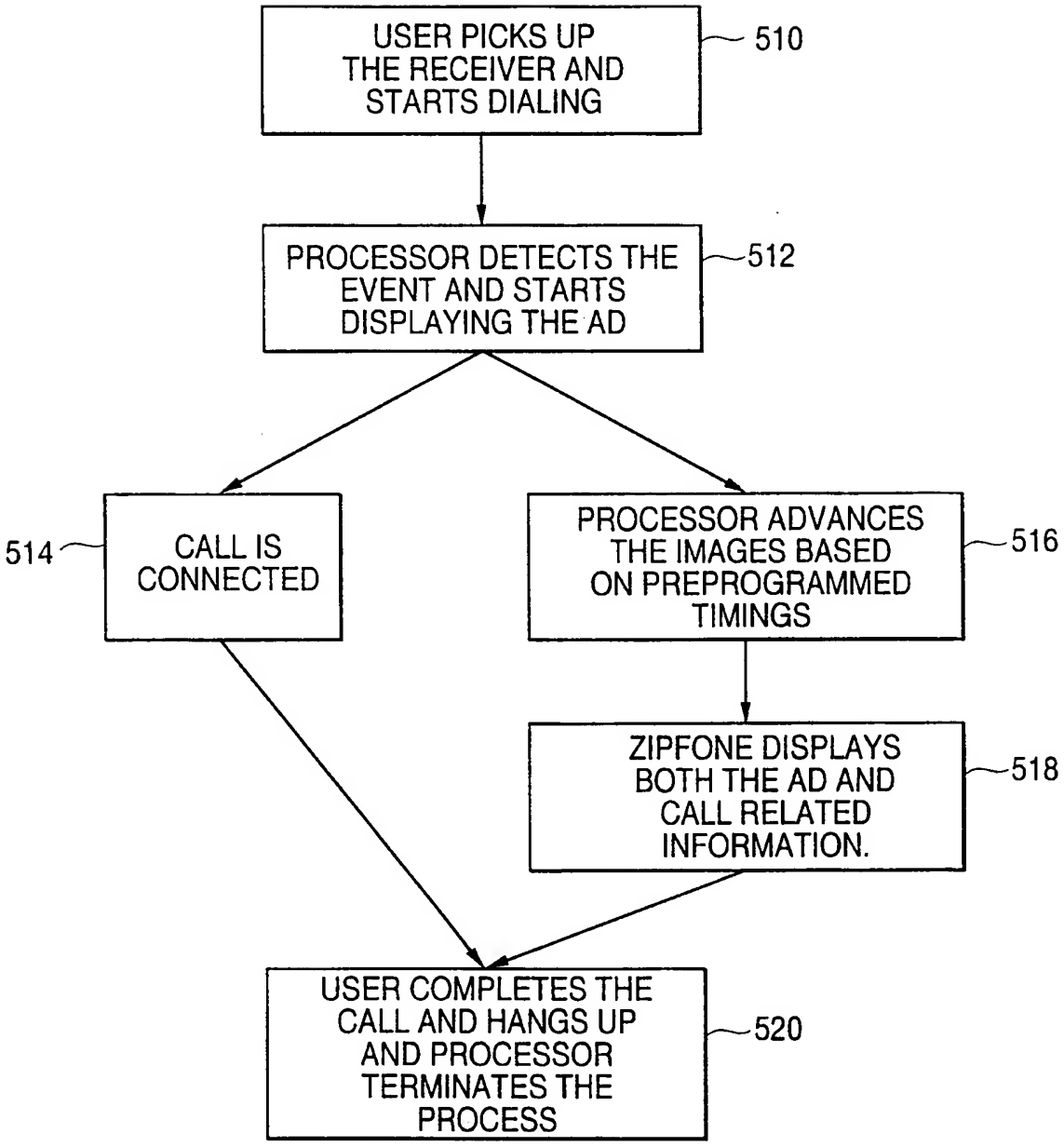

ONLINE UPS
465
AC-DC CONV
467
BATTERY AND CHARGING
469
RS232 OUTPUT
TELEPHONE CIRCUITRY
472
SPEECH CIRCUITRY
474
RINGER CIRCUITRY
476
SPEECH AMPL CIRCUITRY
478
METERING CIRCUITRY
480
SPEAKER FOR AUDIO
RJ11 CONNECTION 485
460
KEYPAD-USER INPUT
435
440
PROCESSOR
415
CARD I/F
425
COIN I/F
430
I/F PORTS
420
410
MEMORY MODULE
445
LCD DISPLAY
450
MODEM MODULE
455

FIG.4

FIG. 5


USER PICKS UP THE RECEIVER AND STARTS DIALING
510
PROCESSOR DETECTS THE EVENT AND STARTS DISPLAYING THE AD
512
514
CALL IS CONNECTED
PROCESSOR ADVANCES THE IMAGES BASED ON PREPROGRAMMED TIMINGS
516
ZIPFONE DISPLAYS BOTH THE AD AND CALL RELATED INFORMATION.
518
USER COMPLETES THE CALL AND HANGS UP AND PROCESSOR TERMINATES THE PROCESS
520